REMARKS

Claims 1-21 are pending in this application. Claims 1-14 and 21 were variously rejected under 35 U.S.C. § 112, second paragraph. Claims 1-5 and 9-15 were variously rejected under 35 U.S.C. §§ 102(b) and (e). Claims 2, 3, 15, 20, and 21 were rejected under 35 U.S.C. § 103.

By this amendment, claims 6, 9-11, and 15 have been canceled and claims 1, 3, 5, 7, 8, 12, 13, 16, 20, and 21 have been amended without prejudice or disclaimer of any previously claimed subject matter. Support for the amendments can be found, *inter alia*, throughout the specification, for example, in original claims 6, 10, 11 and 15.

The amendments are made solely to promote prosecution without prejudice or disclaimer of any previously claimed subject matter. With respect to all amendments and canceled claims, Applicants have not dedicated or abandoned any unclaimed subject matter and moreover have not acquiesced to any rejections and/or objections made by the Patent Office. Applicants expressly reserve the right to pursue prosecution of any presently excluded subject matter or claim embodiments in one or more future continuation and/or divisional application(s).

Applicants thank the Examiner for indicating the allowable subject matter of claim 6-8 and 16-19 if re-written to overcome the indicated rejections and objections.

Applicants have carefully considered the points raised in the Office Action and believe that the Examiner's concerns have been addressed as described herein, thereby placing this case into condition for allowance.

Rejections under 35 U.S.C. §112, second paragraph

Claims 1-14 and 21 were variously rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection.

Although Applicants believe that the claims were sufficiently definite when considered in view of the specification and the understanding of those of skill in the art, Applicants have attempted to respond to the concerns of the Examiner in order to enhance clarity and to facilitate disposition of the present case.

Applicants respectfully disagree that the term "small molecule" renders the claims indefinite to one of skill in the art. As described in paragraph [0019] of the specification, the plastic slide of the invention is prepared such that "not only macromolecules (such as proteins and DNA) but also small molecules (such as metabolites from plants or herbs) can be immobilized to the surface of the slide." As used in the specification, the term "small molecule" is a term commonly used in the art that generally refers to small organic molecules. As noted by the Examiner on page 6 of the Office Action, Cunningham[1] describes biosensor materials with immobilized substances which include nucleic acids, polypeptides and small molecules. Cunningham refers to "small molecules" or "small organic molecules" throughout the published patent application, for example, at paragraphs [0003], [0005], [0013], [0041], [0131], [0133], [0136], and in Example 13.

Applicants respectfully submit that, as used in the specification, the term "small molecule" is a term of art and is well within the understanding of those of skill in the art.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

Rejections under 35 U.S.C. §102

Claims 1, 2, 9 and 14 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Ho *et al.*(U.S. Pat. Application 2002/0028506 A1; "Ho"). Claims 1-3, 9-12, 14, and 15 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Brown (U.S. Pat. No. 5,989692). Claims 1, 4, 5, and 14 were rejected under 35 U.S.C. § 102(e) as allegedly being

[1] Cunningham *et al.*(U.S. Pat. Application 2002/0127565 A1; "Cunningham") cited in Office Action.

anticipated by Cunningham *et al.*(U.S. Pat. Application 2002/0127565 A1; "Cunningham"). Claims 1-3 and 9-15 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Swan *et al.*(U.S. Pat. Application 2003/0113792 A1; "Swan"). Applicants respectfully traverse these anticipation rejections.

As an initial matter, all of the amended claims recite the limitations of original claim 6 or of original claim 16, claims the Examiner acknowledged as free of the cited art on pages 8 and 9 of the Office Action.

As amended, the claimed invention is directed to a surface-treated plastic slide with a coating on the slide which comprises a polyfunctional aldehyde, a compound providing at least one NH_2 group and a polyfunctional epoxide compound. The claimed invention is also directed to a surface-treated polystyrene slide with a coating on the slide formed by applying a positive charges-providing polymer under alkaline conditions.

Ho describes sol-gel coating containing silanes but Ho does not describe styrene slides nor slides coated with a polyfunctional epoxide compound. Brown describes hardenable resinous material including epoxy resins but does not describe a slide coating with a polyfunctional aldehyde nor the use of alkaline conditions for producing a styrene slide. Cunningham describes materials with a substrate layer, a grating layer and an epoxy or plastic cover layer. However, Cunningham does not describe styrene slides nor a coating made with a polyfunctional aldehyde, a compound providing at least one NH_2 group and a polyfunctional epoxide compound as claimed. Swan describes attachment of target molecules on a substrate using an epoxide coating. Swan, however, does not describe a coating made with a polyfunctional aldehyde and a compound providing at least one NH_2 group nor a coating made with a positive charges-providing polymer under alkaline conditions.

For a claim to be anticipated by a reference, the reference much teach each and every element of the claim. Since the cited references do not teach the invention as claimed, they do not anticipate the claimed invention.

Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §§102(b) and (e).

Rejections under 35 U.S.C. §103

Claims 2, 3, 15, 20, and 21 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cunningham in view of Swan. Applicants respectfully traverse this rejection.

A *prima facie* case of obviousness requires that three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20USPQ2d 1438 (Fed. Cir. 1991); MPEP §2143. If any one of these three criteria is not met, a *prima facie* case of obviousness has not been established. As presented below, Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

As outlined above, Cunningham does not describe or suggest the claimed invention. Swan does not provide what is missing from Cunningham. The cited references, either alone or combined, do not teach the surface-treated plastic slides as claimed.

Thus, Applicants respectfully submit that a *prima facie* case of obvious has not been made.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §103.

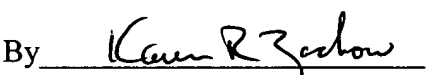
CONCLUSION

Applicants believe that all issues raised in the Office Action have been properly addressed in this response. Accordingly, reconsideration and allowance of the pending claims is respectfully requested. If the Examiner feels that a telephone interview would serve to facilitate resolution of any outstanding issues, the Examiner is encouraged to contact Applicants' representative at the telephone number below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket No. 205032000700.

Dated: July 30, 2004

Respectfully submitted,

By 

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